HAYDEN R. STRICKLAND, P.E.

640 PLAZA DRIVE, SUITE 170 HIGHLANDS RANCH, COLORADO 80129

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POSITION

Project Engineer, Lytle Water Solutions[LLC]

EDUCATION

B.S., Civil Engineering, Colorado State University, Fort Collins, Colorado, 2004.

PROFESSIONAL REGISTRATION

Registered Professional Engineer

Colorado #44426

PROFESSIONAL EXPERIENCE

- Lytle Water Solutions, LLC, Highlands Ranch, Colorado: January 2005 to Present.

PROJECT EXPERIENCE

Mr. Strickland's experience includes conducting constant-rate discharge and step-test discharge tests to determine aquifer characteristics; a specific example being the evaluation of numerous wells and an infiltration gallery for the Town of Fairplay (Fairplay). A constant-rate test and a step test were performed on each well and a constant rate test performed on the infiltration gallery. The information collected was analyzed to determine the performance characteristics of the facilities and Fairplay's ability to meet future demands.

Mr. Strickland was the principal field engineer for the Idarado Legacy project. As the field engineer, Mr. Strickland was responsible for overseeing the development of over 30 residential wells. This included conducting constant-rate tests and collecting water quality samples from each well. These data were then used to prepare a report detailing the drilling, development and water quality results from each well.

PROJECT EXPERIENCE *(Continued)*

Other ground water projects have included several studies to determine the amount of ground water available for pumping. Mr. Strickland analyzed over 200 parcels for Douglas County to calculate the amount of ground water available to the county, which, in turn, resulted in the development of a set of maps showing the aquifer thicknesses of the Dawson, Denver, Arapahoe, and Laramie-Fox Hills aquifers and the location of each parcel.

Mr. Strickland has developed several reservoir operations models for evaluating reservoir operations and yield. Reservoirs have included Pawnee Creek Reservoir, Prewitt Reservoir, Cucharas Reservoir, and Rueter-Hess Reservoir. The Rueter-Hess model included a user interface to allow the user to specify a broad range of inputs and operating scenarios. It also tracked five inflows for each of the four entities storing water in Rueter-Hess Reservoir. It adjusted the changing demands for each entity based on supplies available and provided the user with total reservoir contents and the percentage of contents belonging to each entity. The user was also provided the amount and frequency of spills, and reservoir yield for each entity and the reservoir as a whole. The operational model was used to determine the purpose and need for the Supplemental Environmental Impact Statement associated with enlarging Rueter-Hess Reservoir from 17,000 ac-ft to 71,920 ac-ft.

Modeling done by Mr. Strickland has also included development and application of several ground water (MODFLOW) models. He was involved in analyzing the MODFLOW model created by the State Engineer's Office to predict ground water interactions in the San Luis Valley. In addition, he is also currently involved in a collaborative effort between several firms to create a MODFLOW model for the Cherry Creek alluvial aquifer in the area between Franktown and Cherry Creek Reservoir. This project includes modeling over 18 miles of complex stream and alluvium interaction and over 50 alluvial wells with different pumping schedules. Once finished, the model will be used to simulate various pumping and operational scenarios and to determine what effects each scenario has on vested water rights. In addition, the model will be tied to an accounting model for Cherry Creek Reservoir to determine how reservoir water levels change with each scenario.

In addition to operational models and ground water models, Mr. Strickland also created a surface water model and user interface for Big Bear Municipal Water District (Big Bear) at Big Bear Lake, California. The model, created in Excel using Visual Basic for Applications, allowed Big Bear to calculate flows and graph instantaneous and average flows with the push of a button. Several compound weirs were designed to be used in conjunction with permanently-installed instruments. Data from the instruments were imported to the interface and flows were calculated for each reading, and then averaged for the month. The interface then created a results workbook for the data that included instantaneous flows, average flows, and graphs of each. A monthly summary page that included maximum and minimum flows for the month was also created. The data were automatically appended to any existing results sheet.

PROJECT EXPERIENCE *(Continued)*

Mr. Strickland was the principal field engineer for a study to assess seepage losses for the Brighton Ditch Company of Colorado. In this study, Mr. Strickland obtained flow measurements at various locations along the ditch. These measurements were then compared with measurements at the same locations throughout the irrigation season. The data were then used to determine the seepage losses and location of such losses along the ditch.

Mr. Strickland was involved in a project to determine the availability of water in the Lower South Platte River in northeastern Colorado. This included analyzing the call records associated with this area and determining the amount, and timing, of available flows.